SZIGETI, Istvan, Dr.; SZIRAY, Gyula, Dr.; VIRAGH, Sandor, Dr.; Muszbil, ..., ...

Data on the problems of clinical manifestations and pathology of infectious mononucleosis in connection with a case complicating lupus erythematosus. Orv. hetil. 99 no.27:933-936 6 July 58.

1. A budapesti Orvostudomanyi Egyetem III. sz. Belklinikajanak (Igazgato: prof. Gomori Pal dr. egyet. tanar. M. T. A. lev tagja) kozlemenye.
      (INFECTIOUS MONONUCLEOSIS
            clin. manifest., hematol. & pathol. (Hun))

Viraghalmy, G.

A device for the correct measuring of luminous fix proportions in the
determination of spectral remission and absorption.   p.72

MERES ES AUTOMATIKA. (Merstech ikal es Automatizalasis Tudomanyos Egyesulet)
Budapest , Hungary. Vol.7, no.2/3, 1959

Monthly List of East European Accessions (EEAI) LC,Vol.8, no.11
 November 1959
Uncl.

VIBAKHOVSKIY, A.S. (Leningrad)

Scientific and atheistic education of students in the course of
fundamental laws and theories of chemistry. Khim.v shkole 10 no.3:
16-27 My-Je '55.   (MIRA 8:8)
    (Religion and science) (Chemistry--Study and teaching)

VIRAKHOVSKIY, G.S.; SHEVLYAGIN, V.N.

Operation of chemical workshops. Koks i khim. no.9:44-47 '61.
(MIRA 15:1)

1. Magnitogorskiy metallurgicheskiy kombinat (for Virakhovskiy).
2. Magnitogorskiy gornometallurgicheskiy institut (for Shevlyagin).
(Coal industry--By-products)

VIRANEV, B.,inzh.

Possibilities of increasing labor productivity in mining.
Min delo 18 no.10: 3-8   O'63.

1. "Niproruda".

V RANEV, B.

"Deepening the vertical shaft with a wedge-shaped protective platform."

p. 50 (Minno Delo, Vol. 13, no. 2, 1958, Sofiia, Bulgaria)

VIRANOVSKIY, G.B.; RUDAKOV, A.S.

Centralized power supply network for electric welding systems. From.
energ. 16 no.12:9-11 D '61. (MIRA 14:12)
(Electric welding) (Electric power supply to apparatus)

VIRANT, Jernej, dipl. inz.

Realization of functions of algebra of logic taking into
consideration technical and economic aspects. Automatika
4 no. 5/6 323-327 '63.

1. Fakulteta za elektrotehniko, Ljubljana, Teslina 30.

HÖFLER, K.; AVLIN, F.; MIKLAVZIC, U.; PONIZ, R.; GOSAR, P.; GRUDEN, M.; DOBNIC, J.; VAJDA, B.; PLAKAR, F.; VIRANT, J.; VDOVIC, J.; JEREB, P.; GMLANC, I.; STARIC, P.; SKUBIC, T.; MAGAJNA, B.; KERSIC, K.; LEONARDIS, C.; PIREMAJER, K.; CAJLEN, R.

New books and periodicals. Elektr vest 17 no.1/2:46-56 Ja-F '64.

VIRANT, Jernej, diplomirani inzenir (Ljubljana)

Reflections on the realization of the functions of mathematical logic. Automatika 4 no.4:235-238 '63.

1. Fakulteta za elektrotehniko, Ljubljana.

VIRANT, J.

"Technique of applying electronic analog computers" by V. Borsky
and J. Matyas. Reviewed by J. Virant. Elektr vest 31 no.3/5:120 -
Mr-My '64.

VIRANT, Jernej, inz.

Electronic adaptation of a MAXIMA 10 kg. balance. Automatika
4 no.1:57-59 '63.

1. Elektrotehniska fakulteta, Ljubljana.

PERME, L.; CERNIGOJ, B.; DOBEIC, J.; PLESNICAR, S.; VADNAL, A.; PEHANI, B.;
        SZAVITS-NOSSAN, O.; ZAJC, B.; LEONARDIS, S.; PEHANI, A.; JAGODIC, F.;
        KERSIC, N.; STARIC, P.; VIRANT, J.; GOSAR, P.; AVCIN, F.; MEDAN, A.;
        KRALJ, A.

New books and periodicals. Elektr vest 31 no.3/5: 113-120 Mr-My
'64

SZENDEI, Adam, dr.; VIRANYI, Andras, dr.; KOMAROMY, Jozsef, dr.;
    SZECSENY, Andor, dr.; BARTA, Lajos, dr.; SOOS, Imre, dr.

Experiences on the diagnosis and therapy of pheochromocytoma.
Orv. hetil. 97 no.12:316-319 18 March 56.

1. A Budapesti Orvost. Egyetem III. sz. Belk. (igaz. Gomori, Pal dr.
egyet. tanar), II. sz. Sebeszete Klin. (igaz. Rubanyi, Pal dr.
egyet. tanar), I. sz. Gyermekklin. (igaz. Gegesi-Kiss, Pal dr.
egyet. tanar), Ideg.- es Elmeklinikajanak (igaz.: Nyiro, Gyula dr.
egyet. tanar) kozl.
        (PARAGANGLIOMA
            pheochromocytoma, diag. & ther. (Hun))

VIRANYI, Miklos, HA 5 SD

         National Amateur Radio Operator contest, 1963. Amaterske radio 14
no.9:321 S '64.

VIRANYI, Miklos (HA 5 BD)

The ultrashort wave radio operators' camp is 10 years old.
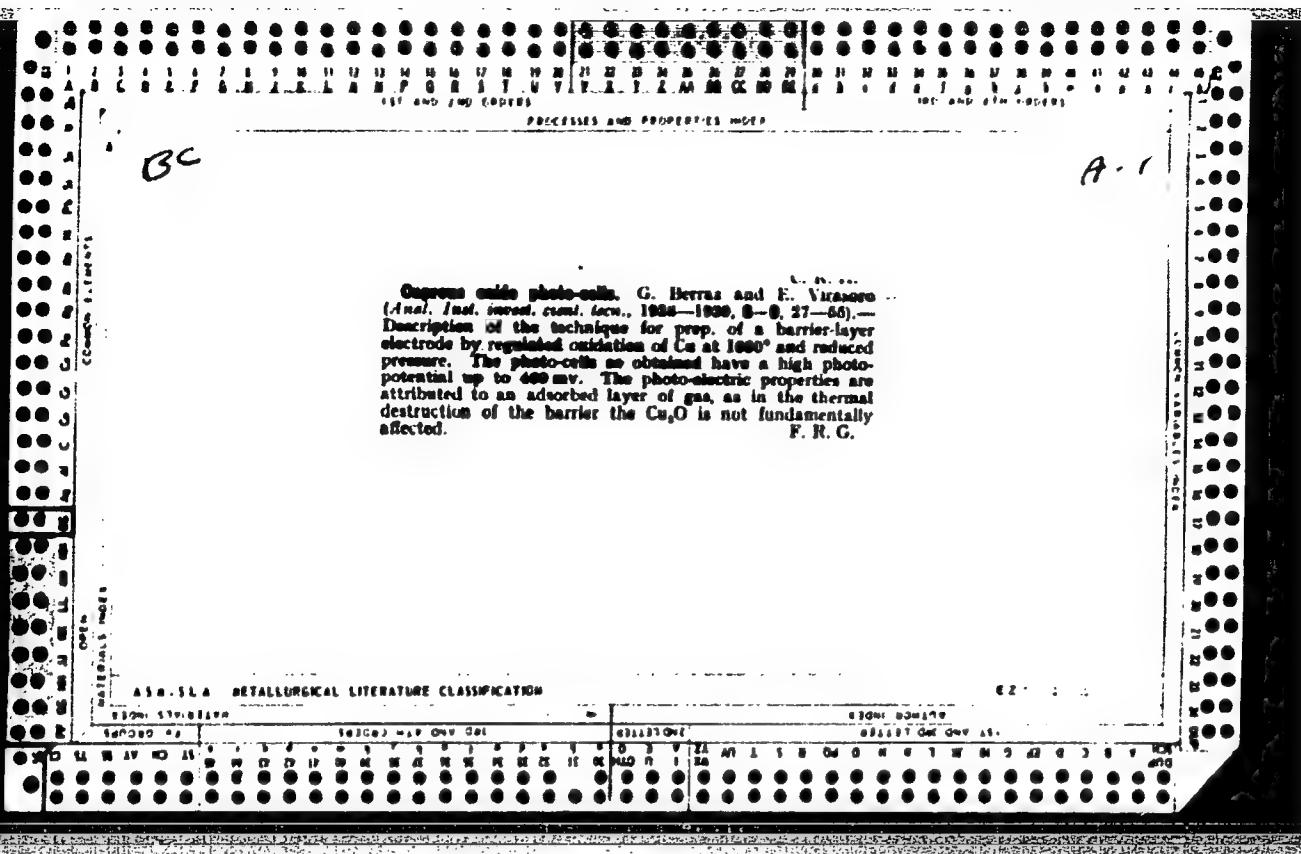Radiotechnika 14 no. 6:218 Je '64.

VIRANYI, Miklos, muszaki foeloado

Some current problems relating to the contests of radio position finding. Radiotechnika 13 no.9:335-336 S '63.

1. Magyar Honvedelmi Sportszovetseg Orszagos Elnoksege Radioal-osztalya.

ARZUMANYAN, Ashot Martirosovich; VIRAPYAN, G., red.; LAZAREV, S.,
        tekhn.red.

        [Friendship; articles, sketches, studies, reminiscences,
        letters on Armenian-Russian ties] Druzhba; stat'i, ocherki,
        issledovaniia, vospominaniia, pis'ma ob armiano-russkikh
        sviaziakh. Erevan, Armianskoe gos.izd-vo. Book 1. 1960.
        703 p. Book 2. 1960. 592 p.   (MIRA 14:4)
                (Armenia--Relations (general) with Russia)

BC

A-1

Cuprous oxide photo-cells. G. Berraz and E. Virasoro (Anal. Inst. invest. cient. tecn., 1936—1938, 6—8, 27—55).— Description of the technique for prep. of a barrier-layer electrode by regulated oxidation of Cu at 1000° and reduced pressure. The photo-cells as obtained have a high photo-potential up to 400 mv. The photo-electric properties are attributed to an adsorbed layer of gas, as in the thermal destruction of the barrier the Cu_2O is not fundamentally affected.

F. R. G.

A device to obtain thin coatings of gray selenium by sublimation in vacuo. G. Bruni and R. Vinaccia. *Atti accad. naz. Lincei* 131, 207-61(1941). App. is described which produces adherent, homogeneous deposits of gray Se, of an av. thickness of 20 microns, on metal disks intended for semiconducting photoelec. cells. The thin Se coating is produced by sublimation of Se at about 0.001 mm. Hg pressure, condensing the vapors on the metal disk maintained at temps. such that the Se deposits as interesting gray Se.   F. M. Summers

VIRBANOVA-ANGELOVA, A.

EXCERPTA MEDICA   Sec.2   Vol.9/8 Physiology, etc.   Aug56

3642, VIRBANOVA-ANGELOVA A. *Formation of an interoceptive conditioned reflex in dogs with different types of nervous system (Russian text) DOKLADY AKAD. NAUK SSSR 1955, 105/5 (1121-1124) Graphs 1 Tables 1

After establishing a pavlovian salivary-feeding conditioned reflex in 6 dogs, the type of nervous system each possessed was determined by several procedures. Then an interoceptive salivary conditioned reflex, also salivary-feeding, was developed in each dog (in 5 by rhythmically inflating small balloon placed in a Thiry Vella fistula, in 1 by a similar balloon in a Pavlov pouch). It is concluded that the speed of stabilization of an interoceptive conditioned reflex depends on the mobility of nervous processes. In dogs with unstable processes of excitation and inhibition there is an increased 'mechanoreceptivity' of the intestinal mucosa.

Kleitman - Chicago, Ill.

VIRBITSKAS, P. I.   Cand Agr Sci -- (dis s) "The 'Litovskaya 3'
(Gubyay) Grade/of Winter Rye."   Kaunas, 1957.   20 pp with diagrams,
23 22 cm. (Min of Agriculture USSR, Lithuanian Agricultural
Academy), 150 copies (KL, 18-57, 96)

VIRCHENKO,I.P., Cand Tech Sci -- (diss) "Studies of

thermodiffusion chroming as a means of increasing   the

WEAR RESISTANCE   of *COMPONENTS* details." Mos, 1958, 23pp with graphs

(Min of Agr USSR. Mos Inst of Mechanization and Electrification

of Agr) 150 copies (KL, 32-58, 108)

- 21 -

VIRCHENKO , N.A. [Virchenko, N.O.]

Integral relation in a class of x^k analytic functions. Dop.
AN URSR no. 6:734-736 '64.   (MIRA 17.9)

1. Kiyevskiy gosudarstvennyy universitet. Predstavleno
akademikom AN UkrSSR Yu. A.Mitropol'skim [Mytropol's'kyi, IU.
O.].

VIRCHENKO, N.A. [Virchenko, N.O.]

Some boundary value problems for x-analytic functions. Dop. AN URSR
no.12:1577-1581 '63.
(MIRA 17:9)

1. Kiyevskiy gosudarstvennyy universitet. Predstavleno akademikom
AN UkrSSR Yu.A. Mitropol'skim [Mytropol's'kyi, IU.O.].

FIKHARKOVA, N.A. [Fikharova, N.O.]; VIROBYAN, N.A. [Virobyan, N. .]

Some integral transformations in a class of Zhkvaniya

Dop. AN UkrP no.2:998-1003 '62.

1. Khovskiy gosudarstvennyy universitet.

S/0021/63/000/012/1577/1581

ACCESSION NR: AP4009734

AUTHOR: Virchenko, N. O.

TITLE: On some boundary-value problems for x-analytical functions

SOURCE: AN UkrRSR. Dopovidi, no. 12, 1963, 1577-1581

TOPIC TAGS: boundary-value problem, x-analytical function, x-analytical-analytical function relation, half-strip, half-strip complex variable

ABSTRACT: The author determined the relation between x-analytical and analytical functions of a complex variable for a half strip. This makes it possible to solve in a closed form some mixed boundary value problems of the theory of potential. The relation between x-analytical and analytical functions of a complex variable was first determined by G. M. Polozhiy (Visny*k KDU, ser. astron. matem. ta mekh, 2, 19, 1959) for regions bounded by a portion of an imaginary axis L and a curve monotone at y. If function $f(z) = u(x,y) + iv(x,y)$ is analytical in a given region and $v/L = 0$, then function

$$\widetilde{f}(z) = \widetilde{u}(x,y) + \widetilde{iv}(x,y) = \int \frac{u(\xi, y)\, d\xi}{\sqrt{x^2 - \xi^2}} + i \int \frac{v(\xi, y)\, \xi\, d\xi}{\sqrt{x^2 - \xi^2}} \qquad (1)$$

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ACCESSION NR: AP4009734

will be analytical in this region and $\tilde{v}/L = 0$. In another study the author and
N.O. Pakhareva (DAN UkrSSR, 998, 1962) showed that when the region being studied
coincides with a quarter of the region then function

$$\tilde{f}_1(z) = \tilde{u}_1(x, y) + i\tilde{v}_1(x, y) = \int \frac{v(\xi, y)\, d\xi}{\sqrt{\xi^2 - x^2}} - i \int \frac{u(\xi, y)\, \xi\, d\xi}{\sqrt{\xi^2 - x^2}} \qquad (2)$$

also will be an x-analytical function and $\tilde{f}(z) = \tilde{f}_1(z)$.

Formulas

$$f(z) = u(x, y) + iv(x, y) = \frac{2}{\pi}\left[\frac{d}{dx} \int \frac{\tilde{u}(\xi, y)\, \xi\, d\xi}{\sqrt{x^2 - \xi^2}} + i \int \frac{\partial \tilde{v}(\xi, y)}{\partial \xi} \frac{d\xi}{\sqrt{x^2 - \xi^2}} \right], \qquad (3)$$

$$f(z) = u(x, y) + iv(x, y) = \frac{2}{\pi}\left[\int \frac{\partial \tilde{v}_1(\xi, y)}{\partial \xi} \frac{d\xi}{\sqrt{\xi^2 - x^2}} - i \int x \frac{\partial \tilde{u}_1(\xi, y)\, d\xi}{\partial \xi \sqrt{\xi^2 - x^2}} \right] \qquad (4)$$

are inversions of formulas (1) and (2). These concepts were used to determine the
connection between functions $f(z)$ and $f_1(z)$ for a half strip $x > 0$, $0 < y < h$ when

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ACCESSION NR: AP4009734

on the lower part of the boundary value y = 0 is given for x   a an imaginary por-
tion and for x   a the real portion of the x-analytical function, and on the upper
part of the boundary value y = h is given the imaginary portion of this function.
It is possible to generalize the results of the study for analyzing x^k-analytical
functions, where k is an odd number. Orig. art. has: 12 equations.

ASSOCIATION: Ky*yivsky*y Derzhavny*y Univorsy*tet (Kiev State University)

SUBMITTED: 16Feb63   DATE ACQ: 03Feb64   ENCL: 00

SUB CODE: MM   NO REF SOV: 002   OTHER: 000

Card 3/3

VIRCHENKO, S.S. (st. Chelyabinsk, Yuzjno-Ural'skaya doroga)

Training of lovomotive crews. Elek. i tepl. tiaga 2 no.10:42-43
O '58.   (MIRA 11;11)

1. Nachal'nik tekhnicheskoy shkoly mashinistov.
            (Locomotive engineers)

SOV/137-59-1-734

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 1, p 99 (USSR)

AUTHORS: Lur'ye, D. A., Virchenko, V. Ya.

TITLE: Supplying the Industry With CO_2 Gas (Snabzheniye promyshlennosti uglekislym gazom)

PERIODICAL: Byul. tekhn. ekon. inform. Sov. nar. kh-va Khar'kovsk. ekon. adm. r-na, 1958, Nr 1, pp 16-20

ABSTRACT: It is pointed out that the production of CO_2 may be increased by means of creating installations for the utilization of waste gases (G) generated during fermentation processes in alcohol, beer, decomposition of fats, etc.; waste G's of certain chemical industries (fuel-G refining, NH_3 synthesis, oil refining) may also be utilized. Installations for the utilization of waste G's are planned in Lisichansk, Chirchik, Rustavi, and other cities. The cost of the CO_2 supplied by these installations will amount to 275-300 rubles per ton. Shipped-in CO_2 may be cheaper than the locally produced variety, provided the dry ice is supplied in containers. Suitable wooden containers, the losses in which constitute 2.5 - 4% per day, had been developed by the All-Union Low-temperature Institute.

Card 1/2

SOV/137-59-1-734

Supplying the Industry With CO_2 Gas

CO_2 may also be obtained from fuel G's of local industries by the absorption-desorption method. This method involves the expenditure of chemical reagents, electrical energy, water, and steam. The cost of the CO_2 thus obtained is 650-850 rubles per ton. In the case of small installations, producer (combustion of solid or gaseous fuel in a stream of O_2) and sulfuric-acid (chemical reaction of $CaCO_3$ with H_2SO_4) methods may be employed. The cost of CO_2 produced by these methods amounts to 935 and 750 rubles per ton, respectively.

A. M.

Card 2/2

DIACONU, C.; VIRCOL, A.; VIRCOL, L.

Some results on the repartition of the Rumanian river flow in the
course of the year. Studii hidrol 2:65-90 '62.

STANESCU, S.; VIRCOL, A.; BIRTU, E.; TETEL, E.; VIRCOL, L.; MARCULESCU, I.;
    CUTE, E.; AVADANEI, A.; BURCIU, O.;CICBANU, S.; ILIE, E.; MOTEA, I.

Hydrcgraphic basin of the Mures River;a hydrologic monograph.
Studii hidrol 6:3-2-3 '63.

DIACONU, C.; VIRCOL, A.; VIRCOL, L.

Some results on the repartition of the Rumanian river flow in the
course of the year. Studii hidrol 2:65-90 '62.

STANESCU, S.; VIRCOL, A.; BIRTU, E.; TETEL, E.; VIRCOL, L.; MARCULESCU, I.;
CUTE, E.; AVADANEI, A.; BURCIU, O.; CICBANU, S.; ILIE, E.; MOTEA, I.

Hydrographic basin of the Mures River; a hydrologic monograph.
Studii hidrol 6:3-2~3 '63.

NITULESCU, M.; MOCIORNITA, C.; DINCA, A.; VIRCOL, L.; VOICU, Gh.; MIHAILESCU, Gh.; NAE, D.; BARBAT, V.; MIHAIL, M.; MUSETESCU, P.; CORBAN, V.; MATEESCU, M.

Monograph on the hydrology of the hydrographic basins of the Iza, Viseu, Sapinta, Tur Rivers.

L 55172-65

ACCESSION NR: AP5017637

... of technical sciences); Vacu, S.

Card

VIREN, V.; GZHEL'SKIY, V.

"Without any unusual talent...."; a photosketch. Sov.voin-38
(MIRA 10:1)
no.15:30-31 Ag '56.
(Soldiers--Recreation)

VIREN, Ye.

"On the banks of the Dnieper" by Porfirii Gavrutto. Reviewed by
E. Viren. Sov.mor.16 no.21:16 N '56.   (MIRA 10:1)
                    (Gavrutto, Porfirii)

VIREZUB, A.I.; GINZBERG, M.A.; KUPINSKIY, R.V.; TVERIKIN, V.T.

Developing a method of continuous deaeration of viscose solutions.
Khim.volok.   no.6:31-33 '59.   (MIRA 13:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo
volokna.
              (Viscose)

MIREZIN, A.T.; GINZBERG, M.A.; NOVIKOV, N.A.; TVERTKIN, V.I.; KUPINSKIY, R.V.; MARKOV, V.V.; NIVIN, T.I.

Performance of the unit for continuous **deaeration** of viscose. Khim. volok. no.2:40-41 '61.
(MIRA 28:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy Institut iskusstvennogo volokna (for Mirezin, Ginzberg, Novikov, Tvertkin). 2. Gosudarstvennyy institut po proektirovaniyu predpriyatiy iskusstvennogo volokna (for Kupinskiy). 3. Kalininskiy kombinat (for Markov, Nivin).

VIREZUB, A.I.; GINZBURG, M...; PAKSHVER, A.B.

Determining air content of viscose. Khim. volok. no.2:57-58 '65.
(MIRA 18:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo
volokna (for Virezub, Ginzberg). 2. Vsesoyuznyy zaochnyy institut
tekstil'noy i legkoy promyshlennosti (for Pakshver).

KHEYFITS, L.a.; VIREZUB, S.I.

Terpene phenols. Part 26: Condensation products of dihydro-
cyclopentadiene with o- and p-cresols and the further trans-
formations of condensation products. Zhur. org. khim. 1 no.8:
1384-1388 Ag '65.   (MIRA 18:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskikh
i natural'nykh dushistykh veshchestv.

KHEYFITS, L.A.; VIREZUB, S.I.

Terpene phenos. Part 17: Transformations of tricyclodecylphenols. Zhur. ob.khim. 34 no.1:119-122 Ja '64.   (MIRA 17:3)

1. Vsescyuznyy nauchno-issledovatel'skiy institut sinteticheskikh i natural'nykh dushistykh veshchestv.

KHEYFITS, L. A.; Vla Ub, S, I.

Production of odorous substances from dicyclopentadiene.
Zhur. ob. Khim. 34 no.6:2081-2084 Je '64.   (MIRA 17

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sintaticheskikh
i natural'nykh dushistykh veshchestv.

GUSEVA, K.A.; RAFANOVA, R.Ya., kand.khim.nauk; BULANOVA, A.V.;
    VIRZUB, S.I.

    Isolating sclareol and obtaining products from it having the
    odor of amber. Masl.-zhir.prom. 25 no.3:29-30 '59.
                                                (MIRA 12:4)

    1. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskikh
    i natural'nykh dushistykh veshchestv.
                (Sclareol)   (Perfumes, Synthetic)

KHEYFITS, L.A.; VIREZUB, S.I.

Terpene phenols. Part 13: Condensation products of
dihydrodicyclopentadiene with phenol. Zhur. ob. khim. 33
no.8:2751-2755 Ag '63.   (MIRA 16:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskikh
i natural'nykh dushistykh veshchestv.

BELOV, V.N.; KHEYFITS, L.A.; VIREZUB, S.I.

Oxidation of carbonyl compounds with hydrogen peroxide and peracids (Baeyer-Villinger reaction). Reakts.org.soed. 10:7-208 '61.   (MIRA 14:10)

(Carbonyl compounds)   (Oxidation)

SIBIRTSEVA, V.Ye.; VIREZUB, S.I.; KUSTOVA, S.D.

Odorous substances from sclareol. Report No.1: Ambrial and
ambroxide.   Trudy VNIISNDV no.5:9-14 '61.   (MIRA 14:10)
            (Odorous substances)   (Sclareol)

Country   :   Rumania   E-2
Category   :   Analytical Chemistry.

Abs. Jour. :   Ref. Zhur - Khim., No 7, 1959   22984

Author   :   Soos, P.; Virf, L.; Blazsek, A.
Institut.   :   Rumanian Academy
Title   :   The Use of Sodium Sulfide in Separation of
                Cations.

Orig Pub.   :   Studii si cercetari chim. Acad. RPR. Fil.
                Cluj., 1957, 8, No 3-4, 231-241

Abstract   :   Description of an improved method for the
separation of cations by means of a solution of Na_2S in an
alkaline medium saturated with CO_2. After decomposition of
the sample being analyzed, Ag^+, Pb^{2+}, Hg_2^{2+} and Tl are re-
moved by precipitation with a dilute solution of HCl. To the
acid filtrate is added 3% solution of H_2O_2, excess H_2O_2 is
removed by boiling, the solution is neutralized (to a uni-
versal indicator) with solid Na_2CO_3, made alkaline with a
few ml of 30% solution NaOH (if NH_3 is present, it is re-
moved by boiling), and treated with 10% solution of Na_2S
until a positive reaction is obtained for $S2-$ with $Pb(CH_3-
COO)_2$ (spot test). The precipitate, containing CuS, Bi_2S_3,

Card: 1/3

Country   : Rumania   E-2
Category   : Analytical Chemistry.

Abs. Jour. : Ref. Zhur - Khim., No 7, 1959   22984

Author   :
Institut.   :
Title   :

Orig Pub.   :

Abstract   : and Cs^+ are identified in a separate sample
after treatment (precipitation or fusion) by means of $Ba(OH)_2$.
                                                B. Manole.

Card: 3/3

RUMANIA / Cosmochemistry. Geochemistry. Hydrochemistry. D

Abs Jour: Ref Zhur-Khimiya, No 4, 1959, 11436.

Author : Soos, P., Virf, L., Blazsek, A., Selenye, Zs.,
          Szabo, A., Soo, A.
Inst   : Rev. Med. (RPR).
Title   : A Chemical and Radiological Analysis of the Med-
          icinal Salt Waters of Singeorgiul de Muresh and
          Orga and of the Mud of Singeorgiul de Muresh.

Orig Pub: Rev. med. (RPR), 1957, 3, No 4, 85-91.

Abstract: A chemical analysis was performed to test the
          spring waters of Singeorgiul de Muresh (in g/l):
          $Li \neq 0.035$, $Na \neq 48.853$, $K \neq 0.238$, $NH_4 \neq 0.203$,
          $Ca_3 \neq 4.258$, $Mg \neq 1.997$, $Fe^2 \neq 0.019$, $Mn^2 \neq 0.001$,
          $Al^3 \neq 0.004$, $F^- 0.0098$, $Cl^- 84.201$, $Br 0.090$,
          $I 0.006$, $HCO_3 - 0.089$, $SO_4^{-2} 0.009$, $HBO_2 0.019$,
          $H_2SiO_3 0.011$; the dry residue is 139, 335; pH, 6.8:

Card 1/2

5

VIRF, L

RUMANIA / Chemical Technology, Chemical Products and Their   H-17
Application. Pharmaceuticals. Vitamins. Antibiotics.

Abs Jour   : Ref Zhur - Khimiya, No 5, 1959, No. 16493

Author   : Soos, P.; Virf, L.; Blazsok, A.
Inst   : Not given
Title   : Determination of Glucosides in Digitalis Employing the
             "Xanthidrol" Method

Orig Pub   : Rev. med. (R.P.R.), 1956, 2, No 3, 68-73

Abstract   : The "xanthidrol" method determines quantitatively the
             digitoxino content in digitalis and in preparations
             derived from it in the three following ways: colori-
             metrically, photocolorimetrically, and by the standard
             series. The obtained results are comparable. It was
             demonstrated for the first time that quantities of alcohol
             and xanthidrol (dibenzo-γ-pyranolo) greatly affect the
             intensity of color of the product when subjected to the

Card 1/2

VIRF, Liviu; MAKAI, Vasile

Identification and quantitative determination of the micro-
elements (copper, zinc. cobalt) in certain mineral waters
by the polarographic method. Studia Univ B-B S Chem 8 no.1:
221-224 '63

Paper chromatographic separation of ions from nickel, cobalt,
copper, cadmium, and zinc and their quantitative determination
by the polarographic method. Ibid.:225-230

1. Pedagogic Institute, Tirgu Mures.

DEMANT, F.; BUCOVA, E.; VIRGALA, J.

Less frequent complications of Salmonella infections with special
reference to their course in childhood. Cesk.pediat. 14 no.12:1070-
1074 D '59.

1. Detska klinika LFUK v Kosiciach, prednosta doc. MUDr. F. Demant.
    (SALMONELLA INFECTIONS in inf.& child.)

PAVKOVCEKOVA, O.; VIRGALA, J.

Bonnevie-Ullrich syndrome. Cesk. pediat. 17 no.12:1100-1103 D '62.

1. Detska klinika Lekarskej fakulty Univerzity P.J. Safarika v
Kosiciach, prednosta prof. dr. E. Demant.
(BONNEVIE-ULLRICH SYNDROME)

BARDOSOVA, G.; DEMANT,F.; GASPAROVA, K.; VIRGALA, J.

Neurological complications of morbilli. Cesk.pediat. 15 no.9: 812-817 S '60.

1. Katedra starostlivosti o dieta LFUK v Kosiciach, veduci prof. MUDr. F.Demant
(MEASLES compl.)
(NEUROLOGIC MANIFESTATIONS in infancy & childhood)

DEMANT, F.; VIRGALA, J. BUCOVA. E.; TARABCIK, M.

Role of Salmonella infections in diarrhea in infants. Cesk. pediat.
14 no.7:607-611 July 59

1. Z Detskej kliniky LFUK v Kosiciach, prednosta doc. MUDr. F. Demant
a z KHES-u v Kosiciach, riaditel I. Kratochvil.
      (SALMONELLA INFECTIONS, in infancy & Childhood)
      (DIARRHEA, in infancy & childhood)

VIRGANSKAYA, N., inzh.-ekonomist

Reserves for improving the effectiveness of large-panel
apartment-house construction. Zhil. stroi. no.2:9-10 '64.
(MIRA 18:11)

—Nitrogen metabolism under different conditions of work and temperature. I. Experimental studies with laboratory animals. Elena Moldai Dan, I———— M.————, Mirza Virgil, and Ioan I———. (————, Cluj, Rumania). *Acad. ——. —————. ——.,* *Comunicari Stint.* 5, ———————————— equal caloric intake, the mice ———————————— creted less N but also ———— ——, —— ——————. mice kept at room temp. In ———— ——————————, the test mice gained more wt. ———————————— that the stored N was exogenously ——————. II. The nitrogen metabolism in people working under a condition of elevated temperatures. The effect of caloric intake. Elena Moldai, Sabina Tragor, Dan B———, and Ioan I———. *——* 401–11.—Workers exposed to higher than normal temps. (furnace operators, etc.) were fed a supplemental caloric diet for 1 week and their metabolism during that time was compared with a 1-week period without addnl. caloric in take. With addnl. food (250 g. meat, 60 g. butter, 2 boiled eggs, and 300 g. bread/day) the urine increased in vol. (9.7%), residue (16%), N (21%), creatinine (37%), and urea (42%). The d. of the urine did not change. Fecal wt. increased by 10%, its dried residue by 24%, and its N content by 35%.

Gary Gerard

(4)

VIRGINSKIY, V.S.

Mining and metallurgy in France during the second half of
the 18th century. Trudy Inst. ist. est. i tekh. 20:153-383
'59.   (MIRA 12:12)

      (France--Mining engineering)
      (France--Metallurgy)

Virgel', V.E.

USSR/General Problems - Method and Technique of Investigation   A-4

Abst Journal : Referat Zhur - Fizika,   No 12,   1956,   33688

Author : Virgel', V. E.

Institution : None

Title : Setup for Experimental Investigation of Precision Balance

Original
Periodical : Izmerit. Tekhnika,   1956,   1,   43-46

Abstract : The setup described insures the possibility of carrying out os-
cillographic recording of many processes: the oscillations of
the beam, oscillations of the trays in different directions, and
the changes in the transient electric resistances between the
steel knife edges and the pads. The transducers employed are
photocells, which operate either directly on a bifilar oscillo-
graph POB-12 or are connected in a bridge circuit which in turn

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USSR/General Problems - Method and Technique of Investigation

Abst Journal : Referat Zhur - Eizika, No 12, 1956, 33688

is connected to the oscillograph. The setup makes it possible to work in rooms having low artificial illumination. The diagram of the setup, an overall photograph, and a specimen of the recording are given.

Card 2/2

VIRGIL, GALEA

RUMANIA/Safety Engineering - Sanitary Engineering. Sanitation.   L.

Abs Jour   : Ref Zhur - Khimiya, No 2, 1957, 7009

Author   : Galea Virgil, Ghelberg Naum
Inst   :
Title   : Use of the Method of N.G. Polezhayev in Investigations of
              the Technological Process at Mercury Processing
              Establishments

Orig Pub   : Studii si cercetari stiint., 1954, Acad. R.P.R. Fil Cluj,
              5, No 1-2, 388-394

Abstract   : Description of the results of quantitative determinations
              of Hg, by the method of Polezhayev, in various substances,
              during investigation of a plant where Hg is produced from
              raw materials, and also of other chemical establishments
              which utilize Hg in technological processes. The content
              of Hg in the air, building materials and biological media,   ,
              is reported.

Card 1/1

VIRGIL, K.

"The liquor industry of Rumania."

p. 16 (Teknika) Vol. 4, no. 6, Nov./Dec. 1957
Tirane, Albania

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4,
April 1958

VIRGIL, R.

Superficiality and bureaucratic style have nothing to do with trade-union activities.

P. 4 (Constructorul. Vol. 9, no. 394, Aug. 1957, Bucuresti, Rumania)

Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 2, February 1958

VIRGIL, R.

Waiting for acceptance. Constr Buc no.756:3   4 July '64.

VIRGIL, A.

Virgil, R. – From the beginning on the useful path. p.2

SO: Monthly List of East European Accessions List (EEAL) LC, Vol 4, No. 11
November 1955, Uncl.

CA

16

Mannitol and milk fermentation of sugar. B. Virgilio, *Ind. saccarifera ital.* **22**, 427(1929); *Listy Cukrovar. Rocklady* **48**, 6.—In fermenting sugar, the yield of mannitol is greater when air cannot enter the fermenting liquid (anaerobic fermentation). In using a diffusion liquor with a polarization of 8.5-9.5 the yields were: lactic acid 4-5.8%, AcOH 1.2-1.6% and mannitol 2.5-4.1%. From polarimetric detns. it is concluded that fructose ferments more rapidly than glucose.   Frank Marksh

A.S.M.-S.L.A. METALLURGICAL LITERATURE CLASSIFICATION

VIRGILIU, F.

Certain less known characteristics of the Land-Mohr inertia circle.   p. 591

INDUSTRIA CONSTRUCTILOR SI A MATERIALELOR DE CONSTRUCTIL, Bucuresti, Vol 6, No. 11,
                                                                Nov., 1955

VIRGILIU, Florian

Contributions to the calculus for horizontal forces of
diaphragm organized structures. Studii cerc mec apl 17
no.6:1533-1605 '64.

1. Petroleum, Gas, and Geology Institute, Bucharest. Submitted
August 4, 1964.

VIRGILIU, Florian

Resistance of bore bits with blades. Studii cerc mec apl 12 no.6: 1305-1320 '61.

1. Institutul de petrol, gaze si geologie, Bucuresti

VIRGIL'YEV, Yu. S.

... ...

...ova, E. A., and ... ...ova. ... ...
...anium-Chromium Syste...

...nov, L. ..., L. A. Rubtsov..., and O. S. Ivanov. Th...
...ture of Uranium-Rich ...oys of the ...nium-Ytt...
... System at 1000°, 850° ...d 600°C

... and R. ... ...irova. Po...nomial Sect...
...obi...-Molybd...m Ternary Phase Diagr...
... ...%) and at 90 (80%) Uranium

... Yu. S., and O. S. Ivanov. Decomposition
... Solution in Uranium-...obium and Uranium-Zircon...
...um Alloys

...lyev, Yu. S. Change ... γ-Phase Region in the Pa...
...m of the Uranium-Zir...um-Niobium-Molybdenum Syste...
...emperatures Below 800°C

... ...0

S/755/61/000/003/023/027

S,

AUTHORS: Virgil'yev, Yu. A., Gruzin, P. L., Popov, I. V.

TITLE: Investigation of the behavior of small additions of calcium in the smelting of nickel-chrome alloys by the radioactive-isotope method.

SOURCE: Moscow. Inzhenerno-fizicheskiy institut. Metallurgiya i metallovedeniye chistykh metallov. no.3. 1961, 216-224.

TEXT: The paper describes the experimental use of the radioactive isotope Ca^{45} for the lab investigation of the behavior of small additions of Ca in the smelting of alloys of the type XH80T (KhN80T). Such additions are employed frequently as deoxidizing agents, and it is desirable to obtain data on the amount of Ca within the alloy, its distribution in an ingot between the various phases of the alloy, the rate of transition of the Ca from the metal to the slag, and the Ca distribution between metal and slag in various deoxidizing procedures. The Ca^{45} tracer employed is β-active, with an energy of 0.26 Mev and a half-life of 152 days. The Ca was introduced into the alloy in the form of a silicocalcium (SC) similar to that utilized in the industry (27% Ca). The first two melts were employed to establish the distribution of the Ca within the ingot and the coefficient of assimilation of the SC upon (1) placement of the radioactive SC on the bottom of a mold, and (2) introduction of

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Investigation of the behavior of small additions ...   S/755/61/000/003/023/027

the radioactive SC underneath a fully developed slag layer formed of a prepared
mixture comprising 65% CaO, 15% CaFr, and 20% MgO. The ingots were cut
longitudinally (along the axis), and the longitudinal and transverse Ca distributions
were investigated by 550-hr radioautography of pulverized samples obtained from
various points. The assimilation coefficient (ratio of total activity of ingot to total
activity of SC introduced) was found to be 78% in ingot (1) and 21% in ingot (2). in
the latter ingot the distribution coefficient (ratio of total activity of slag to total
activity of metal) was 3.4. In ingot (1) the SC migrates upward along the periphery
of the ingot, where it remains 2-3 times as elevated as along the ingot axis. In
ingot (2) the SC concentration on the ingot axis is 25% higher than at the periphery.
Centers of blackening on the radioautographic film indicate the accumulation of the
Ca in nonmetallic inclusions, which are larger in ingot (1) than in ingot (2), where
apparently, most of the large inclusions have succeeded in passing into the slag
phase. A third melt, in which specimens were withdrawn from the melt and from
the slag to determine the time-wise changes, indicated a rapid decrease in Ca
content in the melt during the first 3-4 min, after which the decrease proceeded
more slowly. After about 8 min the specific activity of the metal samples
approached the background value asymptotically. Thus, it may be stated that 1.5-kg
charge in an induction furnace at $1,500^{\circ}C$ loses practically all of its Ca within 10
min from the introduction of the SC into the bath. The determination of the Ca

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Investigation of the behavior of small additions ...   S/755/61/000/003/023/027

concentration in the nonmetallic inclusions formed by Ca oxidation in the liquid metal, which was performed by Dr. Yu. A. Klyachko's electrolytic-dissolution method, is briefly summarized (full-page table). Initially, along with an insignificant formation of nonmetallic inclusions, most of the Ca is found to be dissolved in the metal. With the successive oxidation of the Ca, the CaO, together with the larger nonmetallic inclusions, passes into the slag, so that the Ca decreases rapidly with time of holding of the melt in the liquid condition.   There are 2 figures and 4 tables; no references.

ASSOCIATION: MIFI (Moscow Engineering Physics Institute).

Card 3/3

V/

Doctor of Chemical Sci... ...s,,ed

... ...e s svoysova splavcv urana, toriya i tsirkoniya; ...
...g... ...ure and Properties of Uranium, Thorium, and Zircon um
... ... Collection of Articles) Moscow, Gosatomizdat, 1963.
... ... 2000 copies printed.   3

PART I.   URANIUM-BASE ALLOYS

Card 2/10

LEBEDEV, V.L.; VIRGIL'YEV, Yu.S.; SUBBOTIN, V.A.; CHERIOV, Yu.S.

Changes in the submicroporosity of a thermoanthracite base
material depending on the temperature of heat treatment.
Konstr. uglegraf. mat. no.1:237-242 '64.
(MIRA 17:11)

CIRCULAR, T. ...

VIRGIL'YEV, Yu. S.   SOV/6384

Structure and Properties (Cont.)

Card 4/10 IVANOV, O. S. Doctor of Chemical Sciences, ed. Stroyeniye i svoystva
splavov urana, toriya i tsirkoniya; sbornik statey (Structure and Properties of
Uranium, Thorium, and Zirconium Alloys; Collection Articles) Moscow, Gosatomizdat,1963
378 P.

... ... of the ... ... s, ed

... voystva splavov ur..., toriya i tsirkoniya; ...r.l.
...re and Properties of ... ... Thorium, and Zirconia
Collection of Article: Moscow, Gosatomizdat, 19...
...0 copies printed.

PART I.   URANIUM-BASE ALLOYS

..., D. K., Yu. O. Virgi... ..., and S. S. Ivanov . ...
... Aluminum, Silicon, ..., and Nickel ... ..., ...
...tions of Uranium

...ov..ova, Z. V., and O. S. Ivanov. Uranium Corner of the
Phase Diagram of the Uranium-Aluminum-Silicon System

Khakimova, D. K., O. S. Ivanov, and Yu. S. Virgil'yev. Ura-
...ium Corner of the Phase Diagram of the Uranium-Aluminum-
Iron System

Semenchenkov, A. T., and O. S. Ivanov. Effect of Alloying
on Preservation of β-Phase Uranium by Quenching   22

Card 2/10

AUTHORS: Virgil'yev, Yu.S.,   Gruzin, P.L.

TITLE: Determination of the diffusion coefficients of calcium into a nickel-chrome alloy and into technical iron by the radioactive-isotope method.

SOURCE: Moscow. Inzhenerno-fizicheskiy institut. Metallurgiya i metallove-deniye chistykh metallov. no.3. 1961, 210-215.

TEXT: The paper describes the experimental application of the radioactive-tracer method to determine the diffusion coefficients (DC) of Ca in a Cr-Ni alloy of the XH80T (KhN80T) type and in technical Fe. Radioactive Ca^{45} with a β-energy of 0.26 Mev and a half-life of 152 days was employed. The analytical relationships whereby the DC can be found from a measurement of the integral activity at various depths in the specimen are set forth. The radioactive isotope was applied to a face of the previously ground specimens by rubbing pulverized CaO onto it and then tying pairs of specimens together with their radioactive faces in contact, whereupon they were diffusion-annealed in vacuum at 950°C. Upon completion of the anneal the quartz ampoules containing the specimens were shattered and the specimens quenched. A 1-mm surface layer was machined off to eliminate any possible surface diffusion. The DC was determined by measuring

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Determination of the diffusion coefficients of ...   S/755/61/000/003/022/027

the activity of successively removed layers of metal of specified thickness. The variation of the activity with depth and, hence, the DC for a given temperature is determined and tabulated. The straight-line variation of log D with $1/T^{\circ}K$ is graphed for both KhN80T steel and the technical Fe. The slope of that line yields the activation energy Q (91,000 cal/mol for KhN80T and 66,000 cal/mol for Fe) and the pre-exponential factor D_0 (460 and 0.8 cm^2/sec, respectively). The relative error in the DC thus determined is estimated to be less than 12%. Thus it is found that the diffusion of Ca from CaO into KhN80T steel and technical Fe exists, but proceeds at an extremely slow rate. Thus, the diffusion rate of Ca throughout the entire T range of KhN80T (up to 1,300°C) is several times smaller than that of Cr in the same alloy (for Cr: Q = 70,000 cal/mol and D_0 =115.0 cm^2/sec). The elevated activation energy of the diffusion of Ca is attributed to its diffusion from the oxide. There are 2 figures and 2 tables; no references.

ASSOCIATION: MIFI (Moscow Engineering Physics Institute).

2/2
Card 2/2

VIRGIL'YEV, Yu.S.; GRUZIN, P.L.; POPOV, I.V.

Studying the behavior of small additions of calcium in the man-
ufacture of nickel-chromium alloys by the method of radioactive
isotopes. Met. i metalloved. chist. met. no.3:216-223 '61.
(MIRA 15:6)
(Nickel-chromium alloys—Metallurgy)
(Radioisotopes—Industrial applications)

VIRGIL'YEV, Yu.S.; GRUZIN, P.L.

Determining calcium diffusion ore coefficients in nickel-chromium
alloys and in commercial iron by means of artificial radioactive
isotopes. Met. i metalloved. chist. met. no.3:210-215 '61.
(MIRA 15:6)
(Nickel-chromium alloys--Metallurgy) (Iron--Testing)
(Radioisotopes--Industrial applications)

33882
S/640/61/000/000/003/035
D258/D302

21.2100

AUTHORS: Ivanov, O. S. and Virgil'yev, Yu. S.

TITLE: Decomposition of the niobium-uranium γ-solid solution

SOURCE: Akademiya nauk SSSR. Institut metallurgii. Stroyeniye splavov nekotorykh sistem s uranom i toriyem. Moscow, 1961, 35-47

TEXT: This paper describes the investigation of the decomposition process of a γ-solid solution, whose existence has been shown by the author and G. J. Terekhov (Ref. 1: This publication, p. 20) within the composition range of 20 – 70 at.-% of Nb. Specifically, alloys containing 20, 30, 40, 50, 60 and 70 at.% of Nb were quenched (from 1000°C) and then held, for periods of 50 hrs each, at a series of successive increasing temperatures. At the end of each heating period, the sample was subjected to hardness tests and x-ray analyses. The results are as follows (samples are referred to by numbers 1 to 5 in the order of their increasing Nb contents): The hardness (in kg/mm^2) of sample 1 increases greatly, from 180

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Decomposition of the ...

at 0°C to a maximum of 55 at 450°C and decreases sharply, to 400 (at 600°C); Sample 2 exhibits similar characteristics and a maximum (at 460°C), with the upward slope beginning only at 210°C; the slope of sample 3 is still less pronounced and its maximum lies at 520°C; sample 4 exhibits a slight rise, from 350 kg/mm^2 to about 400 (at 550°C), without any maximum; and the last two samples do not change their hardness at all. X-ray analysis of sample 2 shows that its parameter a_γ remains constant up to 280°C and slopes then in a straight line downwards, attaining 3,351 kX at 590°C (near to 3,34 kX, for $a_{\gamma_{Nb}}$); a_γ for samples 3 and 4 remains unchanged, at 3.41 kX and 3,38 kX, respectively. The a_γ lines of sample 3 disappear at 500°C and are replaced by lines, characteristic of a body-centered cubic lattice, a_{γ_1}, at some 0.035 kX below a_γ. Finally, a third series of lines, also of a body-centered cubic lattice and termed a_{γ_2}, appears at 3,350 kX after heating at 550°C. Sample 4

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Decomposition of the ...

has unchanged parameters throughout. The significant temperature ranges of samples 2, 3 and 4 were reaxamined by submitting these samples to isothermal heating for different periods and testing the products for hardness and by x-ray analyses. Thus, sample 2 was heated to 285°C for up to 760 hrs, and to 500°C for 50 hrs; sample 3 - to 480°C for 50 hrs and also to 550°; and samples 4 and 5 to 550°C. The following conclusions were reached: Decomposition of the γ-solid solution is primarily a function of the Nb contents; it proceeds homogeneously at below 30 at.% of Nb and heterogeneously at 30 at.% and above. At the limit of 30 at.%, the decomposition mechanism depends on the temperature of isothermal tempering: It is homogeneous up to 450°C and heterogeneous above 450°C. The hetero-geneous decomposition of samples containing 40 at.% proceeds in two stages: (1) The separation of α-U in the first stages gives rise to the formation of the metastable γ_1-phase; (2) γ_1 is transformed into γ_2, the latter being probably supersaturated with U and in equilibrium with γ_{Nb} (containing 72 at.% of Nb). The effect of age-

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Decomposition of the ...

ing (rise of hardness with heating time) is a function of the quantity of separated-out uranium and, therefore, decreases as more Nb enters the alloy. The temperature, at which the decomposition begins to proceed at an appreciable rate, rises along with the rise in Nb content of the alloy and so does the temperature corresponding to a hardness maximum. Finally, the parameters of both metastable phases decrease as the Nb content increases. There are 10 figures and 1 Soviet-bloc reference.

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33896
S/640/61/000/000/017/035
D205/D302

21.2100

AUTHORS: Ivanov, O. S. and Virgil'yev, Yu. S.

TITLE: Structure of quadruple alloys of the system uranium-zirconium-niobium-molybdenum at 1000 and 800°C

SOURCE: Akademiya nauk SSSR. Institut metallurgii. Stroyenie splavov nekotorykh sistem s uranom i toriyem. Moscow, Gosatomizdat, 1961, 265-295

TEXT: Of the high-melting elements suitable for alloying uranium to make it serviceable in reactors, the best with respect to low neutron capture ability are Zr, Nb and Mo. Ti and V are well soluble in γ-U, but have a high neutron capture ability, while Fe and Cr behave in an opposite manner. Other elements of low neutron capture ability are only very sparingly soluble in γ-U and can only serve as minor additives. Therefore, the region close to the U-corner of the above quadruple system is of great interest. 226 alloys lying on the planar sections of the concentration tetrahedron having constant U contents of 80, 70, 60 and 50 at.-% were investi-

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D205/D302

Structure of quadruple ...

gated. The alloys were smelted in an arc furnace in pure argon. The
phase states at 1000°C and 800°C were fixed by quenching in water.
The alloys were investigated metallographically, by X-rays and by
hardness measurements. The data were plotted as property versus
composition. Every section is represented by a family of curves,
each curve corresponding to a fixed amount of one of the 3 alloying
elements. From discontinuities of the curves, the microstructure
and X-ray data the phase limits were estimated. All data were fi-
nally generalized into perspective representations of isothermic
tetrahedrons of the quadruple system. The triangular, planar sec-
tions at constant U content, are given a very detailed considera-
tion. The isothermal tetrahedrons contain 5 phase volumes. In both
the 1000° and 800°C tetrahedrons the monophase γ-volume adjoins
the U-Zr-Nb system, passing by its narrowing part along the Nb-Mo
edge. It was established that the monophase state of the γ-solid
solutions occurs at a higher alloying than in the limiting triple
systems U-Zr-Mo and U-Nb-Mo. In the sections of 80, 70 and 60 at.-%
U the regions of the martensitic transformation $\gamma \rightarrow \alpha$ adjoining the

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Structure of quadruple ...

binary U-Zr system are limited. The stronger influence of Mo, as compared with Nb on the depression of this transformation is observed in the section with 80% U only; in the other sections the influence of Mo and Nb is equal. There are 33 figures and 11 references: 6 Soviet-bloc and 5 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: B. A. Rogers and D. Atkins, J. Metals, 7, 9, 1034 (1955); D. Summers – Smith, J. Inst. Metals, 83, 277-282 (Feb. 1955); R. F. Domogala, D. J. McPherson and M. Hansen, J. Metals, 5, 1, 73-79 (1953); P.C.Z. Pfeil, J. Inst. Metals, 77, 553-570 (1950).

Card 3/3

33897
S/640/61/000/000/018/035
D205/D302

21.2100

AUTHORS: Ivanov, O. S. and Virgil'yev, Yu. S.

TITLE: Investigating the stability of γ-solid solutions fixed by quenching in alloys of U-Zr-Nb-Mo after prolonged annealing in the 430-550°C range

SOURCE: Akademiya nauk SSSR. Institut metallurgii. Stroyeniye splavov nekotorykh sistem s uranom i toriyem. Moscow, Gosatomizdat, 1961, 296-306

TEXT: The aim of this investigation was to reveal alloys which retain stable γ-solid solutions and are also creep-resisting or, alternatively, alloys which produce hard decomposition products of the γ-solid solutions. The investigated specimens were quenched from the γ-solid solution region at 1000°C and their hardness in the cold state was examined after prolonged annealing (1000 – 2000 hours) in the 430 – 550°C temperature range. The total amount of alloying elements was 20, 30, 40 and 50 at,-%. Curves of equal hardness are shown on the triangular, planar sections of the con-

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Investigating the stability ...

centration tetrahedron. In the alloys of the sections with 80 and 70 at.-% of U the solid solution decomposes entirely during the first 100 hours of annealing at 500°C. Further annealing leads to coagulation of the decomposition structures. In the sections of 60 and 50% U, regions are found in which the decomposition of the solid solution is hampered to such a degree that it remains stable after 1000 hours of annealing. In the more alloyed section of 50% U this stable region persists after annealing at temperatures up to 550°C. With the increase of the sum total of the alloying elements the influence of the decomposition on hardness decreases which is caused by a decrease in the amount of the α-U decomposition product. There are 12 figures and 1 Soviet-bloc reference.

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21,2100

AUTHOR: Virgil'yev, Yu. S.

TITLE: Non-metallic inclusions in the alloys of uranium with zirconium, niobium and molybdenum

SOURCE: Akademiya nauk SSSR. Institut metallurgii. Stroyeniye splavov nekotorykh sistem s uranom i toriyem. Moscow, Gosatomizdat, 1961, 307-311

TEXT: The data on non-metallic inclusions encountered in the alloys of U with Zr, Nb and Mo, smelted in an arc furnace using a non-consumable electrode are considered. The U employed was 99.78% pure and contained 0.12 - 0.02% w/w of carbon and iodide Zr, Nb and Mo prepared by a metallo-ceramic method were used. Western metallographic data on the identification of carbide, hydride, nitride, fluoride and oxide inclusions in uranium were employed. It was found that in the binary U-Mo alloys a non-stoichiometric carbide of uranium is the main type of non-metallic inclusion. In the ternary U-Nb-Mo alloys the monocarbide NbC is more stable. In alloys

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